

Title (en)

Sampling clock correction in a multicarrier receiver

Title (de)

Korrektur des Abtasttaktes in einem Mehrträgerempfänger

Title (fr)

Correction de l'horloge d'échantillonnage dans un récepteur multiporteur

Publication

EP 1049301 B1 20070627 (EN)

Application

EP 00302402 A 20000324

Priority

US 28240399 A 19990331

Abstract (en)

[origin: EP1049301A2] A modem (55) including receive circuitry (30), implemented by way of a digital signal processor (32;32'), is disclosed. The receive circuitry (30) operates according to a receive clock (CLKr), that is based on the output of a free running oscillator (50). An incoming frequency multiplexed signal (f(t)) is sampled by an analogue-to-digital converter (31) and demodulated by means of a Fast Fourier Transform (36). After demodulation, a phase rotator (40) applies a phase shift to the demodulated signal, corresponding to an estimated phase offset (tau) between the receive clock (CLKr) and a pilot signal (P) transmitted by the transmitting modem; a finite impulse response filter (42), filters the demodulated signal, to correct for phase error based upon an estimated frequency offset (DELTA). According to another disclosed embodiment, a pre-emphasis FIR filter (52) and a pre-emphasis phase rotator (54) are applied to an upstream signal, based upon the estimated phase offset (tau) and frequency offset (DELTA). <IMAGE>

IPC 8 full level

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CPC (source: EP KR US)

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Cited by

GB2364866A; GB2364866B; EP1755256A1; CN100409608C; KR100866781B1; US8331491B2; US7707235B2; US9647862B2; WO2014142612A1; WO0245333A1; WO02073870A3; US7751448B2; US7881345B2

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